



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,406	07/29/2003	Bryce A. Jones	2303	7229
28005	7590	11/15/2005		
SPRINT 6391 SPRINT PARKWAY KSOPHT0101-Z2100 OVERLAND PARK, KS 66251-2100			EXAMINER FERGUSON, KEITH	
			ART UNIT 2683	PAPER NUMBER

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/629,406

Applicant(s)

JONES ET AL.

Examiner

Keith T. Ferguson

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Claim 18 recites the limitation "the WWAN" in line 3. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 19 recites the limitation "the wireless network" in line 6. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,2 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipate by Mimura.

The claimed invention reads on Mimura as follows:

Art Unit: 2683

Regarding claims 1 and 9-11, Mimura discloses a method (fig.11) for triggering a mobile station to perform actions (fig. 11), detecting that a mobile station (fig. 12 MSJ) communicating with a first radio network (fig. 12 BS4) has changed location (movement I to movement II) and thereafter stopped moving (movement II) (fig. 12); and in response to detecting that the mobile station has changed location and thereafter stopped moving, performing a predetermined action (i.e. the mobile station send the reception power of a pilot channel of a target base station to the source base station for possible handoff) (paragraph 0126 through paragraph 0135).

Regarding claim 2, Mimura discloses a computer readable medium having stored therein instructions for causing a processor to execute the method (fig. 2 numbers 13a-13c and 33 and paragraph 0126 lines 1-15).

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

Art Unit: 2683

the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura in view of Matsumoto et al..

Regarding claim 3, Mimura discloses a method as discussed supra in claim 1 above. Mimura differs from claim 3 of the present invention in that it does not disclose determining the mobile station has not thereafter changed location again within a predetermined amount of time. Matsumoto et al. teaches a mobile station moves from one position to another position and stops at point A and remains at point A for 10 minutes (paragraph 0052 line 1 through paragraph 0053 line 10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mimura with determining the mobile station has not thereafter changed location again within a predetermined amount of time in order for the mobile station to inform the base station it received a stronger pilot signal from a nearby base station for handoff, as taught by Matsumoto et al.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura in view of Ho et al..

Regarding claim 4, Mimura discloses a method as discussed supra in claim 1 above. Mimura differs from claim 4 of the present invention in that it does not disclose detecting that the mobile station has changed location within a predetermined amount of time. Ho et al. teaches a mobile station reports its location to the network when a specified time period has elapsed after its last location update (col. 2 lines 9-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mimura with detecting that the mobile station has changed location within a predetermined amount of time in order for the mobile station to provide the source base station a location update message to inform that it is moving out of the area, as taught by Ho et al..

8. Claims 5-8,12,13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura in view of Dorenbosh.

Regarding claims 5,6,7,8, Mimura discloses a method as discussed supra in claim 1 above. Mimura differs from claim 5-8 of the present invention in that it does not disclose the first radio network is a WWAN, wherein the mobile station communicates with a plurality of base stations in the WWAN, detecting that the mobile station is communicating with an additional base station not in the plurality of base stations, determining that the mobile station is no longer communicating with one of the base stations, detecting a handoff of the mobile station between base stations, detecting a change in relative strengths of pilot signals of base stations. Dorenbosh teaches a first radio network is a WWAN (fig. 1 number 106), wherein the mobile station communicates with a plurality of base stations in the WWAN (fig. 6 number 108), detecting that the mobile station is communicating with an additional base station not in the plurality of base stations (fig. 1 number 116), determining that the mobile station is no longer communicating with one of the base stations (fig. 1), detecting a handoff of the mobile station between base stations (fig. 1 and paragraph 0017), detecting a change in relative strengths of pilot signals of

Art Unit: 2683

base stations (paragraph 0029). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mimura with the first radio network is a WWAN, wherein the mobile station communicates with a plurality of base stations in the WWAN, detecting that the mobile station is communicating with an additional base station not in the plurality of base stations, determining that the mobile station is no longer communicating with one of the base stations, detecting a handoff of the mobile station between base stations, detecting a change in relative strengths of pilot signals of base stations in order for the mobile station for the mobile station to receive high speed internet connection in the WWAN and receive an internet connection when handing off to a preferred network which provides cheaper rates, as taught by Dorenbosh.

Regarding claims 12 and 13, Mimura discloses a method as discussed supra in claims 1 and 11 above. Mimura differs from claims 12-13 of the present invention in that it does not disclose powering up a second radio in the mobile station, wherein the mobile station uses the second radio to communicate with the second radio network (IEEE 802.11 network) attempting to establish a connection with the second radio network; successfully establishing the connection with the second radio network; in response to successfully establishing the connection with the second radio network, terminating a connection with the first radio network; and powering down a first radio in the mobile station, wherein the mobile station uses the first radio

Art Unit: 2683

to communicate with the first radio network. Dorenbosh teaches powering up a second radio in the mobile station 9 (fig. 2 number 203), wherein the mobile station uses the second radio to communicate with the second radio network (WLAN) (IEEE 802.11 network) attempting to establish a connection with the second radio network (paragraph 0040 through paragraph 0044); successfully establishing the connection with the second radio network (paragraph 0040 through paragraph 0044); in response to successfully establishing the connection with the second radio network, terminating a connection with the first radio network (paragraph 0040 through paragraph 0044); and powering down a first radio in the mobile station, wherein the mobile station uses the first radio to communicate with the first radio network (see fig. 2 and paragraph 0040 through paragraph 0044). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mimura with powering up a second radio in the mobile station, wherein the mobile station uses the second radio to communicate with the second radio network (IEEE 802.11 network) attempting to establish a connection with the second radio network; successfully establishing the connection with the second radio network; in response to successfully establishing the connection with the second radio network, terminating a connection with the first radio network; and powering down a first radio in the mobile station, wherein the mobile station uses the first radio to communicate with the first radio network in order for the mobile station to handoff from the first network to a wireless LAN network when roaming through a building and when the quality of communication fails, as taught by Dorenbosh.

9. Claims 14-16, 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosh in view of Mimura.

Regarding claims 14, 16 and 19, Dorenbosh discloses a method for switching between communicating with a WWAN and a WLAN (wireless network) other than a WWAN (fig. 3 and paragraph 0040 through paragraph 0044), the method comprising: determining that a mobile station has changed location (fig. 3 and paragraph 0040



Art Unit: 2683

through paragraph 0044); enabling a wireless radio in the mobile station (fig. 3 and paragraph 0040 through paragraph 0044), wherein the mobile station uses the wireless radio to communicate with the wireless network (fig. 3 and paragraph 0040 through paragraph 0044); and attempting to communicate with the wireless network (fig. 3 and paragraph 0040 through paragraph 0044). Dorenbosh differs from claim 14 of the present invention in that it does not explicit disclose the mobile station thereafter stopped moving. Mimura teaches a mobile station (fig. 12 MSj) that moves from area I and stops at area II (fig. 12 and paragraph 0126). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dorenbosh with the mobile station thereafter stopped moving in order for the mobile station to register with the WLAN when the mobile station has roamed within a building, as taught by Mimura.

Regarding claim 15, Dorenbosh discloses a computer readable medium having stored therein instructions for causing a processor to execute (fig. 2 number 215).

Regarding claim 18, Dorenbosh discloses the WWAN is a CDMA network (paragraph 0012).

Regarding claim 20, Dorenbosh discloses a mobile station (fig. 2) comprising: a processor (211); a memory (215); a first radio for communicating with a first radio network (201); logic stored in the memory and executable on the processor to (i) determine that the mobile station has changed (paragraph 0025 through paragraph 0037); and (ii) in response to determining that the mobile station has changed location, performing a predetermined action (i.e. the mobile station register with a new network) (paragraph 0025 through paragraph 0037). Dorenbosh differs from claim 20 of the present invention in that it does not explicit disclose the mobile station thereafter stopped moving. Mimura teaches a mobile station (fig. 12 MSj) that moves from area I and stops at area II (fig. 12 and paragraph 0126). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dorenbosh with the mobile station thereafter stopped moving in order for the mobile station to register with the WLAN when the mobile station has roamed within a building, as taught by Mimura.

Regarding claims 21-24, Dorenbosh discloses a second radio for communicating with a second radio network (fig. 2 number

Art Unit: 2683

235); and logic stored in the memory and executable on the processor to (i) in response to determining that the mobile station has changed location enabling the second radio (paragraph 0025 through paragraph 0037), and (ii) attempting to communicate with the second radio network using the second radio (paragraph 0025 through paragraph 0037).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorenbosh in view of Mimura as applied to claim 14 above and in further view of Sorenson et al..

Regarding claim 17, the combination of Dorenbosh and Mimura differs from claim 17 of the present invention in that they do not disclose failing to establish a connection with the wireless network other than the WWAN; disabling the wireless network radio in the mobile station, waiting a predetermined period of time; re-enabling the wireless network radio in the mobile station; and re-attempting to establish a connection with the wireless network. Sorenson et al. teaches a multiple mode communication device for switching between multiple communication systems (col. 1 lines 7-15), and if one connection with the current communication systems is not successful then re-attempting to communicate with the current communication systems after a predetermined time (col. 4 lines 33-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Dorenbosh and Mimura with failing to establish a connection with the wireless network other than the WWAN; disabling the wireless network radio in the mobile station, waiting a predetermined period of time; re-enabling the wireless network radio in the mobile station; and re-attempting to establish a connection with the wireless network in order for the mobile station to seek service from a preferred service provider that have cheaper tariff when roaming between different communication systems, as taught by Sorenson et al..

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith T. Ferguson whose telephone number is (571) 272-7865. The examiner can normally be reached on 6:30am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Keith Ferguson  
Art Unit 2683  
October 2, 2005

**KEITH FERGUSON**  
**PRIMARY EXAMINER**  
